

WHAT IS CLAIMED IS:

1. A schema translation tool, comprising:

a mapping module operable to:

5 receive information regarding a source schema and a target schema, the source and target schemas each comprising a taxonomy comprising a hierarchy of classes into which products may be categorized, at least the source schema further comprising a product ontology associated with one or more of the classes, each product ontology comprising one or more product attributes; and

10 associate one or more source classes of the source schema with one or more target classes of the target schema; and

an ontology generation module operable to generate a product ontology for each of the target classes based on the product ontologies of the associated source classes.

15 2. The translation tool of Claim 1, wherein the mapping module is further operable to:

receive input from a user indicating one or more source classes to be associated with one or more target classes; and

20 associate the source classes with the target classes in response to the input from the user.

3. The translation tool of Claim 2, wherein the mapping module is further operable to:

25 generate a graphical representation of the taxonomies of the source and target schemas, the graphical representation allowing the user to graphically associate classes of the source schema with classes of the target schema; and

communicate the graphical representation to the user.

4. The translation tool of Claim 1, wherein the source classes are leaf 30 classes of the source schema.

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5. The translation tool of Claim 1, wherein the ontology generation module is operable to generate a product ontology for a target class by determining the intersection of the product attributes included in the product ontologies of the associated source classes.

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6. The translation tool of Claim 1, wherein the ontology generation module is further operable to generate a product ontology for a parent class of a plurality of target classes by determining the intersection of the product attributes included in the product ontologies of the target classes, the product ontologies of the target classes having been generated by the ontology generation module.

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7. The translation tool of Claim 1, wherein:

15 at least the source schema further comprises a seller ontology associated with one or more of the classes, each seller ontology comprising one or more attributes associated with one or more sellers of a product; and

the ontology generation module is further operable to generate a seller ontology for each of the target classes based on the seller ontologies of the associated source classes.

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8. The translation tool of Claim 1, wherein:

one or more pointers identifying one or more seller databases are associated with at least one source class, the seller databases including product data associated with one or more products categorized in the source class; and

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the mapping module is further operable to associate the pointers of the source class with one or more target classes associated with the source class.

9. A method for translating between schemas, comprising:

receiving information regarding a source schema and a target schema, the source and target schemas each comprising a taxonomy comprising a hierarchy of classes into which products may be categorized, at least the source schema further comprising a product ontology associated with one or more of the classes, each product ontology comprising one or more product attributes;

associating one or more source classes of the source schema with one or more target classes of the target schema; and

generating a product ontology for each of the target classes based on the product ontologies of the associated source classes.

10 10. The method of Claim 9, further comprising:

receiving input from a user indicating one or more source classes to be associated with one or more target classes; and

15 associating the source classes with the target classes in response to the input from the user.

11. The method of Claim 10, further comprising:

generating a graphical representation of the taxonomies of the source and target schemas, the graphical representation allowing the user to graphically associate classes of the source schema with classes of the target schema; and

communicating the graphical representation to the user.

12. The method of Claim 9, wherein the source classes are leaf classes of

25 the source schema.

13. The method of Claim 9, further comprising generating a product ontology for a target class by determining the intersection of the product attributes included in the product ontologies of the associated source classes.

14. The method of Claim 9, further comprising generating a product ontology for a parent class of a plurality of target classes by determining the intersection of the product attributes included in the product ontologies of the target classes.

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15. The method of Claim 9, wherein:

at least the source schema further comprises a seller ontology associated with one or more of the classes, each seller ontology comprising one or more attributes associated with one or more sellers of a product; and

10 the method further comprises generating a seller ontology for each of the target classes based on the seller ontologies of the associated source classes.

16. The method of Claim 9, wherein:

one or more pointers identifying one or more seller databases are associated with at least one source class, the seller databases including product data associated with one or more products categorized in the source class; and

the method further comprises associating the pointers of the source class with one or more target classes associated with the source class.

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17. Software for translating between schemas, the software embodied in a computer-readable medium and, when executed, operable to:

receive information regarding a source schema and a target schema, the source and target schemas each comprising a taxonomy comprising a hierarchy of classes into which products may be categorized, at least the source schema further comprising a product ontology associated with one or more of the classes, each product ontology comprising one or more product attributes;

associate one or more source classes of the source schema with one or more target classes of the target schema; and

generate a product ontology for each of the target classes based on the product ontologies of the associated source classes.

18. The software of Claim 17, further operable to:

receive input from a user indicating one or more source classes to be associated with one or more target classes; and

associate the source classes with the target classes in response to the input from the user.

19. The software of Claim 18, further operable to:

generate a graphical representation of the taxonomies of the source and target schemas, the graphical representation allowing the user to graphically associate classes of the source schema with classes of the target schema; and

communicate the graphical representation to the user.

20. The software of Claim 17, wherein the source classes are leaf classes of the source schema.

21. The software of Claim 17, further operable to generate a product ontology for a target class by determining the intersection of the product attributes included in the product ontologies of the associated source classes.

22. The software of Claim 17, further operable to generate a product ontology for a parent class of a plurality of target classes by determining the intersection of the product attributes included in the product ontologies of the target classes.

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23. The software of Claim 17, wherein:

at least the source schema further comprises a seller ontology associated with one or more of the classes, each seller ontology comprising one or more attributes associated with one or more sellers of a product; and

10 the software is further operable to generate a seller ontology for each of the target classes based on the seller ontologies of the associated source classes.

24. The software of Claim 17, wherein:

one or more pointers identifying one or more seller databases are associated with at least one source class, the seller databases including product data associated with one or more products categorized in the source class; and

the software is further operable to associate the pointers of the source class with one or more target classes associated with the source class.

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25. A system for translating between schemas, comprising:

means for receiving information regarding a source schema and a target schema, the source and target schemas each comprising a taxonomy comprising a hierarchy of classes into which products may be categorized, at least the source schema further comprising a product ontology associated with one or more of the classes, each product ontology comprising one or more product attributes;

means for associating one or more source classes of the source schema with one or more target classes of the target schema; and

means for generating a product ontology for each of the target classes based on the product ontologies of the associated source classes.

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26. A schema translation tool, comprising:
a mapping module operable to:

receive information regarding a source schema and a target schema, the source and target schemas each comprising a taxonomy comprising a hierarchy of classes into which products may be categorized, at least the source schema further comprising a product ontology associated with one or more of the classes, each product ontology comprising one or more product attributes, at least the source schema further comprising one or more pointers identifying one or more seller databases and associated with one or more classes, the seller databases including product data associated with one or more products categorized in the classes;

generate a graphical representation of the taxonomies of the source and target schemas, the graphical representation allowing the user to graphically associate the classes of the source schema with classes of the target schema;

communicate the graphical representation to the user;

receive input from a user indicating one or more source classes of the source schema to be associated with one or more target classes of the target schema;

associate one or more source classes with one or more target classes in response to the input from the user; and

associate the pointers of the source classes with one or more target classes associated with the source class; and

an ontology generation module operable to generate a product ontology for each of the target classes based on the intersection of the product attributes included in the product ontologies of the associated source classes.

27. A method for translating between schemas, comprising:

receiving information regarding a source schema and a target schema, the source and target schemas each comprising a taxonomy comprising a hierarchy of classes into which products may be categorized, at least the source schema further comprising a product ontology associated with one or more of the classes, each product ontology comprising one or more product attributes, at least the source schema further comprising one or more pointers identifying one or more seller databases and associated with one or more classes, the seller databases including product data associated with one or more products categorized in the classes;

10 generating a graphical representation of the taxonomies of the source and target schemas, the graphical representation allowing the user to graphically associate the classes of the source schema with classes of the target schema;

communicating the graphical representation to the user;

15 receiving input from a user indicating one or more source classes of the source schema to be associated with one or more target classes of the target schema;

associating one or more source classes with one or more target classes in response to the input from the user;

associating the pointers of the source classes with one or more target classes associated with the source class; and

20 generating a product ontology for each of the target classes based on the intersection of the product attributes included in the product ontologies of the associated source classes.

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28. Software for translating between schemas, the software embodied in a computer-readable medium and, when executed, operable to:

receive information regarding a source schema and a target schema, the source and target schemas each comprising a taxonomy comprising a hierarchy of classes into which products may be categorized, at least the source schema further comprising a product ontology associated with one or more of the classes, each product ontology comprising one or more product attributes, at least the source schema further comprising one or more pointers identifying one or more seller databases and associated with one or more classes, the seller databases including product data associated with one or more products categorized in the classes;

generate a graphical representation of the taxonomies of the source and target schemas, the graphical representation allowing the user to graphically associate the classes of the source schema with classes of the target schema;

communicate the graphical representation to the user;

receive input from a user indicating one or more source classes of the source schema to be associated with one or more target classes of the target schema;

associate one or more source classes with one or more target classes in response to the input from the user;

associate the pointers of the source classes with one or more target classes associated with the source class; and

generate a product ontology for each of the target classes based on the intersection of the product attributes included in the product ontologies of the associated source classes.

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